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REMARKS

Claims 1, 3, 4, 6, 7, 9-13, 15-17, 19, 20 and 22 are pending in the application. Claims 1, 13 and 17, which are the independent claims, are currently amended. Claims 2 and 18 are now cancelled. Claims 3, 4, 6, 7, 9, 10, 19, 20 and 22 are original. Claims 11, 12, 15 and 16 were previously amended. Reconsideration is requested.

The Office required an explanation of the support in the disclosure for the amendments to the claims made by the response filed November 17, 2003. Other than correction of informalities, the amendments are each similar to that made to claim 1 by adding the recitation "wherein the multicast routing table includes a plurality of routing entries, and wherein routing entries are placed in the multicast routing table only for link state advertisements having a multicast capable bit set indicating that the associated router is a multicast router." Support for that recitation is in the specification at page 9, lines 1-8, which states:

"FIG. 9 shows a process 200 for building a multicast routing table. After receiving a link state advertisement 202, a router can update its unicast routing table 204. If the link state advertisement includes an multicast bit 206, the router can also update the multicast routing table 208 by determining the multicast short path tree through multicast capable routers (e.g., those routers setting the MC bit)."

Admittedly, the recitation in the claims and the supporting section of the specification do not match word-for-word. However, the idea that the multicast routing entries are placed in the multicast routing table only when the MC bit is set is the logical conclusion from the cited section of the specification, particularly in view of the problem that results from use of unicast routing table information as described at page 7, lines 19-32 in connection with FIG. 7.

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Claims 1 and 13 were rejected under 35 U.S.C. §101 for allegedly claiming non-statutory subject matter. The narrow interpretation of the case law advanced by the Office is surprising because the Office routinely allows method claims to computer software inventions with similar language structure to the claims submitted by Applicant. However, Applicant recognizes that the usual practice of the Office is not necessarily binding on an Examiner, and Applicant has amended the claims in the manner suggested in the Office Action. Withdrawal of the rejection is therefore requested.

Claim 1 was rejected under 35 U.S.C. 112 because of the recitation "whereby the multicast capable router is able to recognize and forward a multicast packet that is received via a path that is not indicated as the shortest path in the unicast routing table." Support for the recitation is in the specification at page 7, line 19 through page 8, line 16. In particular, the description associated with Fig. 7 illustrates the problem that can occur when the multicast packet is received via a path that is not indicated as the shortest path in the unicast routing table in a prior art system. In short, the problem is that the packet is dropped. The description associated with Fig. 8 illustrates how the problem is solved by generating a multicast routing table in addition to the unicast routing table, and using a Dijkstra algorithm to produce a multicast short path tree which may differ from the unicast short path tree. Claim 1 recites an embodiment of the solution to the problem, and the "whereby" clause is simply a recitation of the result that follows from the limitations of the body of the claim. The "whereby" clause itself does not introduce any additional limitation. Withdrawal of the rejection is therefore requested.

Claims 1-4, 6-7, 9, 13, 15-20 and 22 were rejected under 35 U.S.C. §103(a) over Deering in view of Shah. Claims 1, 13 and 17, which are the independent claims, each include a

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recitation similar to now cancelled claims 2 and 18 that reverse path forwarding is performed using the multicast routing table. The Office suggested that the feature is described in Shah at sections 2.1 and 3.3. Applicant respectfully disagrees and requests reconsideration. In section 2.1 Shah mentions reverse path forwarding, truncated reverse path broadcasting and reverse path multicasting. However, there is no teaching that reverse path forwarding is performed using the multicast routing table. In fact, in section 3.3 Shah states that "the multicast routing component extracts the next hops for all destinations from the node it is connected to and stores them (the link towards the next hop) in the unicast routing table." (emphasis added). Later in the same section Shah states that "if any destination is not directly reachable from a particular source then it uses the next-hop stored in the unicast routing table generated previously." (emphasis added). Hence, Shah teaches away from the presently claimed invention. Withdrawal of the rejections of claims 1, 13 and 17 is therefore respectfully requested.

Claims 3, 4, 6, 7, 9-12, 15, 16, 19, 20 and 22 are dependent claims which further distinguish the independent claims, and are allowable for the same reasons stated above with regard to claims 1, 13 and 17. Withdrawal of the rejections of claims 3, 4, 6, 7, 9-12, 15, 16, 19, 20 and 22 is therefore also requested.

Claims 1, 13 and 17 were also rejected under 35 U.S.C. §102(b) as being anticipated by Maufer. However, claims 1, 13 and 17 distinguish Maufer for the same reasons stated above with regard to Shah. In particular, the claims distinguish Maufer by reciting that reverse path forwarding is performed using the multicast routing table.

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Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Holmes W. Anderson, Applicants' Attorney at 978-264-6664 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

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Date


Holmes W. Anderson, Reg. No. 37,272
Attorney/Agent for Applicant(s)
Steubing McGuinness & Manaras LLP
125 Nagog Park Drive
Acton, MA 01720
(978) 264-6664

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